

# UV Waterworks Emergency Relief Unit

Disrupted supplies of clean drinking water in disaster situations can lead to outbreaks of waterborne disease. Shipping and distributing bottled safe drinking water into a disaster area for several days to weeks is expensive—it can cost more than a dollar per gallon of water.

Researchers at Berkeley Lab, with funding from WaterHealth International, Inc. (WHI) of Napa, California and the U.S. Department of Energy, have developed a portable system to provide temporary on-site water treatment after a natural disaster has disrupted supply. This system, the UV Waterworks Emergency Relief Unit, will be available commercially soon.

The ERU can treat turbid floodwaters or biologically contaminated municipal water. Lab tests successfully cleaned waters with high turbidity levels and 1% sewage supernatant.

Physical filters remove silt and suspended fine particles. These are followed with UV treatment to eliminate bacteria and viruses. An activated carbon filter improves taste and odor while removing limited soluble chemical contamination.

## Each system:

- requires 200 watts of electric power (can be powered by solar photovoltaic cells)
- can treat about 5,800 gallons per day
- has an estimated cost of \$10,000
- one person can set up the unit rapidly.

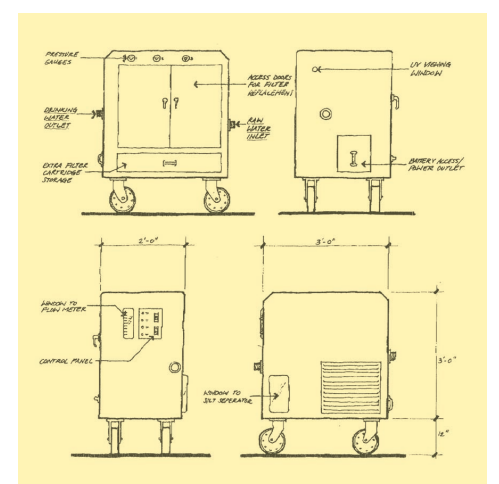
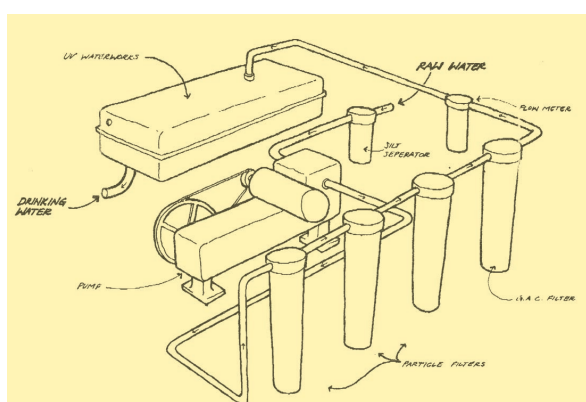
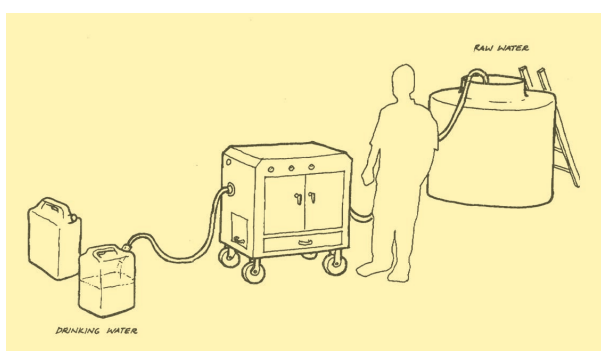
One system could pay for itself in two days by replacing the need to purchase and transport bottled water to affected areas.



*Experimental version of the UV Waterworks Emergency Relief Unit.*

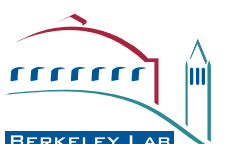


*Water treated by the UV Waterworks ERU is available for immediate consumption.*



*Artist's sketches of a commercial UV Waterworks Emergency Relief Unit.*

For further information: <http://www.lbl.gov/>



**ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY**  
A U.S. DEPARTMENT OF ENERGY MULTI-PROGRAM SCIENTIFIC LABORATORY  
OPERATED BY THE UNIVERSITY OF CALIFORNIA



<http://www.waterhealth.com>